



DSMS Safety & Environmental Program

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DSMS Safety & Environmental Manager



- The DSMS Program is the responsibility of the JPL Interplanetary Network Directorate (IND). Examples of responsibilities are:
 - Enable telescience and telepresence throughout the Solar System and beyond.
 - “Bring the sensors to the scientists and the planets to the public.”



- IND Overview
 - Design, development, operation, and services of NASA's Deep Space Network (DSN) and JPL's Advanced Multi-Mission Operations System (AMMOS)
Note: (DSMS=DSN+AMMOS)
 - JPL's programmatic focal point for telecommunications, navigation, information systems, information technology, computing, software engineering, and multi-mission operations systems



- DSMS Safety and Environmental Program major responsibilities”
 - Leading in a proactive role of safety and environmental protection issues. Emphasis is on controls, both in-house, and contractor activities and operations.



- Organizations being supported are:
 - 900 Interplanetary Network Directorate
 - 902 DSN Advanced Tracking & Observational Techniques Office
 - 905 IND Systems Engineering and Standards Office
 - 920 DSMS Plans and Commitments Program Office
 - 930 DSMS Operations Program Office
 - 940 DSMS Engineering Program Office
 - 960 Microwave Array Project
 - 970 IND Technology Program Office
 - 990 Optical Communications Demonstration



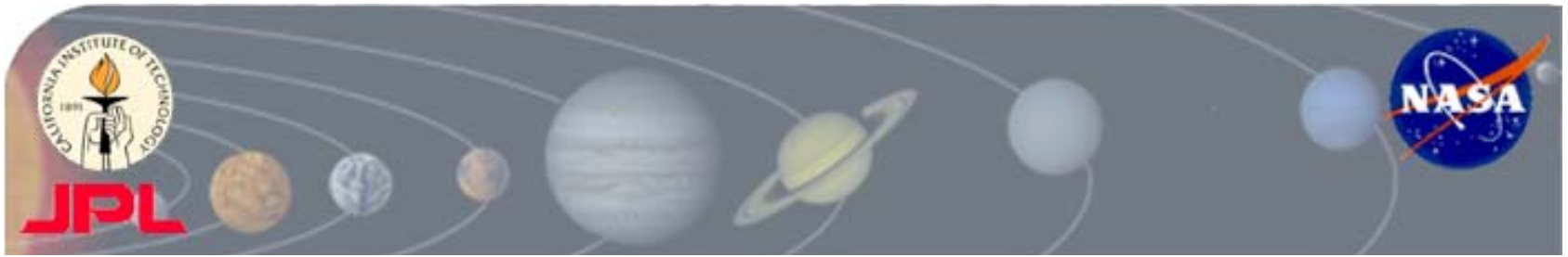
- Safety and Environmental Support is for:
 - Inclusion of existing and changing safety and environmental requirements for program management and planning
 - Assessment of risk to personnel, equipment, systems, facilities, and infrastructure, that could impact mission
 - Input for budgetary planning for safety and environmental compliance



- Safety and Environmental Support for: (Cont'd.)
 - Coordination with the National Environmental Policy Act (NEPA) and air/space safety
 - Input for systems and construction safety for new developments
 - Conduct general safety and environmental audits of operational areas and specific audits on areas of interest such as electrical safety, fire protection, and environmental protection



- Safety and Environmental Support for: (Cont'd.)
 - Advise and assist for safety and environmental issues
 - Participation for reviews such as Preliminary Definition and Cost Review, Preliminary Design Review, Critical Design Review, Test Readiness Review, Downtime Readiness Review, DSMS Delivery Review, and Mission Event Readiness Review
 - Preparation of systems safety checklists and Engineering Lift Plans
 - Sign-offs on transfer agreements for Safety



Safety Support of MER



- Canberra Deep Space Communications Complex
 - Brush fires surrounded the DSN's Canberra complex on January 18, 2003
 - All external fire hydrants were used as were all external fire hoses
 - The CDSACC fire truck with 600 liter tank and pump was used extensively as were backpack units
 - Complex was saved due to the safety fire systems put in place and continually upgraded



Canberra Deep Space Communications Complex

January 18, 2003



Canberra Deep Space Communications Complex

January 18, 2003



Canberra Deep Space Communications Complex

January 18, 2003





Canberra Deep Space Communications Complex

January 18, 2003



- Canberra Deep Space Communications Complex
 - 70-Meter Antenna DSS-43 Hydrostatic Oil Fire Incident on June 24, 2003
 - Two technicians attacked the fire with portable extinguishers and, with support from the fire sprinkler system, successfully suppressed the fire in approximately nine minutes from first indication of fire until final suppression
 - The antenna was returned to service approximately 27 hours after the fire. Physical damage was limited to \$25,400 (AUD) or \$16,891
 - Safety fire systems in place saved the 70-meter antenna



Canberra Deep Space Communications Complex

June 24, 2003



Canberra Deep Space Communications Complex

July 3, 2003



- Goldstone Deep Space Communications Complex
 - Provided support for the transition from CSOC to ITT
 - MER support proceeded without a hitch even though ITT day one was January 1, 2004



Safety Support of MER

- ACP – Activity Contention Period
 - Provided support for heavy mission period of Sept '03 to Feb '04